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**INVESTIGATE OIL
SHALE DEPOSITS**

MEMORANDUM IS SUBMITTED TO
REPRESENTATIVE HOWELL.

According to Statistics By the Bureau of Mines the United States Has Produced 63 Per Cent of The World's Output of Petroleum During the Past Year.

WASHINGTON, D. C., May 8.—Val H. Manning, Director of the United States Bureau of Mines, has presented to Representative Joseph Howell a memorandum in explanation of the purpose of the bureau to conduct an investigation of the oil shale deposits of this country, particularly those situated in Eastern Utah and Western Colorado.

The importance of such an investigation is best indicated by a comparison of the possible yield of petroleum from shales and from present sources. According to the statistics submitted by the bureau, the United States has produced 66 per cent of its total production of petroleum, and is today producing 65,000,000, or 30,000,000 barrels out of approximately 125,000,000 barrels per annum. Its total production of crude petroleum to date has been 3,600,000,000 barrels. A careful estimate covering the developed fields and the possibility of opening new fields based on the best geological information available, according to the bureau of mines, is that our potential supply from present sources may amount to 7,000,000,000 barrels, or at the present rate of consumption 125,000,000 barrels a year sufficient to last about twenty-seven years.

Oil Shale Deposits.

Director Manning, in his communication to Representative Howell, makes the important statement that the possible yield of shale oil from known shale deposits in Utah and Colorado is several times the total amount of the past and future estimated production of petroleum from wells. The oil shale beds in these two states extend over about twenty-eight hundred square miles, and in addition to those beds there are other areas of oil shale in these two states, as well as in Wyoming and adjoining states, and some of the Eastern States, that have not been as thoroughly tested as the areas in Utah and Colorado, but which may be equally important when tested.

The prediction is also made that shale oil will supplement the production of petroleum from wells, and that it must furnish the lubricating oils as well as the gasoline of the future. It is even possible, according to Director Manning, that this source of gasoline may become an important factor in the gasoline situation, which suggests the development of the shale oil distilling industry in these sections within the immediate future.

In addition to the oil content of the shales, an important item that will contribute to the successful exploitation of the fields is the value of the nitrogen products such as ammonium sulphate.

Oil Shale Industry.

The oil shale industry was first developed in Scotland, where shales have been distilled for the past fifty years, and the oil has been sold in competition with petroleum imported from foreign countries. The yield per ton of shale has gradually decreased, owing to the exhaustion of the richer shale, until the average yield is approximately twenty gallons to a ton of shale. In comparison with the Scotch shale, which has been worked with profit for so many years, the Utah and Colorado shales yield more petroleum, averaging at least twenty-five gallons per ton.

In addition to the oil that has been derived from the shale in Scotland, fields of thirty to seventy pounds of ammonium sulphate have been obtained per ton of shale. The average quantity of shale distilled during the past ten years have varied from 2,000,000 to a little over 3,000,000 tons a year. The statistics for 1917, which are given in the 1913 memoirs of the geological survey of Scotland, show that 3,150,000 tons of shale were distilled, from which was obtained 78,000,000 gallons of crude oil, the equivalent of 1,700,000. From this yield there was marketed 125,000 barrels of naphtha and gasoline, 475,000 barrels of kerosene, 30,000 barrels of gas and fuel oil, 240,000 barrels of lubricating oil, 25,000 tons of paraffin wax, and 24,000 tons of ammonium sulphate.

The total value of these products was in the neighborhood of \$10,000,000 for the year 1916. Owing to insufficient laboratory equipment, the Bureau of Mines has not been able to make accurate determinations of the maximum yield of nitrogen products, but it may be that the shales are distilled in proper retorts and in proper methods the yield of nitrogen products of the Utah shales will be at least equivalent to that of the Scotch shale, according to Director Manning.

To Investigate Methods.

It is the purpose of the Bureau of Mines, if the appropriations are secured, to investigate carefully all the commercial as well as the technological features of the oil shale industry, beginning with a first hand study of the practices in Scotland. To this end, provision is suggested to authorize the sending of a technical expert to include in the investigation a thorough study of the possibilities of obtaining increased yields of gasoline and aromatic hydro-carbons such as benzol and toluol from the crude shale oil by improved conversion processes, and also with reference to the ascertainment of the amount and value of possible nitrogen products obtainable in the distillation of the local shales. For this purpose, it is recommended that the appropriation be made sufficient to equip a laboratory with the apparatus necessary for

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**LARGE LOSS IN COUNTY
THROUGH BOG CHOLERA**

Through the prevalence of bog cholera the ranches of the Bear River and Yampa River districts have lost thousands of dollars worth of hogs, according to Dr. A. C. Young, state live stock inspector. Dr. Young says carelessness in handling infected animals is responsible for the large loss. He declares also that there will be greater loss unless the ranchers having sick animals call veterinarians and isolate the infected hogs. The farmer is said to have lost about a hundred hogs valued at more than twenty dollars each.

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